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INDIANA FARMER & GARDENER.

Indianapolis, Saturday, October 25, 1845.

Taking a Hint.

It is very surprising to see how slow men are to take a hint. The frost destroys about half the bloom on fruit trees; every body prognosticates the loss of fruit; instead of that, the *half* that remains is larger, fairer, and higher-flavored than usual; and the trees instead of being exhausted, are ready for another crop the next year. Why don't the owner *take the hint* and thin out his fruit every bearing year? But no, the next season sees his orchard overloaded, fruit small, and not well formed; yet he always *boasts* of that first mentioned crop without profiting by the lesson it teaches.

We heard a man saying, "the best crop of celery I ever saw, was raised by old John——, on a spot of ground where the wash from the barn-yard ran into it after every hard shower." Did he take the hint, and convey such liquid manure to his trenches in the garden? Not at all; he bragged aqout that wonderful crop of celery, but would not take the hint.

We knew a case where a farmer subsoiled a field and raised crops in consequence which were the admiration of the neighborhood; and for years the field showed the advantages of deep handling. But we could not learn that a single farmer in the neighborhood took the hint. The man who acted thus wisely, sold his farm and his successor pursued the old way of surface-scratching.

A stanch farmer complained to us of his soil as too loose and light; we mentioned ashes as worth trying; "well, now you mention it, I believe it will do good. I bought a part of my farm from a man who was a wonderful fellow to save up ashes, and around his cabin it lay in heaps. I took away the house and ordered the ashes to be scattered, and to this day I notice that when the plow runs along through that spot, the ground turns up moist and close-grained." It is strange that he never took the hint! There are thousands of bushels of ashes lying not far from his farm about an old soap and candle factory with which he might have dressed his whole farm.

A farmer gets a splendid crop of corn or grain from off a grass or clover lay. Does he take the hint? Does he adopt the system which shall allow him every year just such a sward to put his grain on? No, he hates book-farming, and scientific farming, and "this notion of rotation;" and jogs on the old way.

A few years ago our farmers got roundly

into debt; and they have worried and sweat under it, till some of them have grown greyer, and added not a few wrinkles to their face. Do they take the hint? Are they not pitching into debt again?

A few years ago *mules* commanded a high price; every body raised mules forthwith; the market of course was glutted; the price fell; every body quit the business; markets became empty and the price rose; a few men who had stuck to the business pushed in their droves and made money; and now every body is raising mules again. The same game is played every four or five years with pork; men make when pork is scarce, but few farmers have stock on hand. They instantly rush into the business, flood the country with hogs and get almost nothing for them. Why don't men take the hint? *A moderate stock all the time*, makes more money than that system which has none when the price is high and too many when the price is low.

Because, this year, the wheat crop has been very large and fine, and the price low, not half as much will be put in this fall as was last fall. Those who are wise, foreseeing this fact and sowing largely will, if the season favors wheat, reap a handsome profit.

Auctioneers tell us that a "wink is as good as a word." We give both, and hope our readers will *take the hint*.

Fall Work in the Garden.

Planting seeds may be performed for very early spring use. Lettuce, spinage, and radishes, may be sown in a sheltered spot, and they will come forward ten days or a fortnight earlier than those which shall have been sown in spring.

Clearing up the garden should be thoroughly performed. Let pea-brush be removed, bean poles and flower stakes be collected and put under shelter. Collect all refuse vines, haulm, stems and stalks and wheel them to a corner to rot, or to be ready for use in covering flower beds. Let the alleys be hoed out for the last time, and it will be as good as one hoing in the spring, when they will probably be too wet to hoe.

Gravel may now be laid in the walks; if ashes is to be spread, it may be done in autumn, and save time in the spring.

All tender plants are to be removed or secured by covering.

The best covering to secure the earth from frost, that we know of, is a layer of leaves, say three inches thick when well packed down, and *upon them* two or three inches of chip dirt, with the coarsest part on top. We have had the soil unfrozen in severe winters when so covered. In this manner, tuberoses, gladiolus, dahlias, tiger flowers, etc., may be kept out through the winter. The gladiolus thus treated makes splendid tufts of blossoms. It may be prudent to try only a few at first, and adventure more as experience gives confidence.

Celery which is to be left in the trenches should first be well covered with straw, and then boards should be placed upon the top in such a manner as to shed the rain. Great quantities of wet rot it when it is not growing; and freezing and thawing *in the light* destroys it.

If portions of the garden have been infested with cut-worms, etc., let it be spaded and thrown up loosely just before freezing weather. A clay soil will be ameliorated by frosts, if treated in the same way. A light, loose soil, should not be worked in the fall.

Protecting Plants in Winter.

Very many shrubs, vines, roses, etc., usually regarded as tender, may yet be safely left standing in the garden if properly protected.

The neck of plants, i. e. that part at which the roots and stem come together, requires thorough protection; both because it is the most tender, (as some say) and because it is at this point that freezing and sudden thawing must occur. The black soil absorbing heat rapidly, the neck of a plant will be first and most affected by the morning sun; and this is the reason, we think, rather than any special tenderness of parts, why plants are killed at the crown of the root. Let the ground be well covered with leaves or with coarse manure, and let it come up three or four inches high on the

stem. It is better to have the top strawy, rather than dark colored manure.

It is the sun, and not the frost, that, for the most part, kills the stems of half-hardy plants. Protection is often, therefore, only thorough shading. The Bengal, Tea, and Noisette roses are left out at Philadelphia and at Cincinnati without detriment.

Drive a stake by the side of the plant, and drawing up the branches to it, cover them with straw, or bass-matting wrapped around them. Kegs, barrels, boxes, etc., may be turned over such as are not too high and will sufficiently protect them. Air holes should be bored in barrels, etc., and the north side is the best for the purpose.

Grape vines which need protection should be loosened from the trellis or wall, pruned, laid down on the ground and earth thrown over them three or four inches deep. Isabella and Catawba grape vines will need no protection.

ORIGINAL CORRESPONDENCE.

For the Indiana Farmer and Gardener.

PARIS, Ky., October 9, 1845.

Dear Sir:—The annual fair of the Bourbon County Agricultural Society took place here last week, and continued three days. This is now the only society of the kind, now living, in the State, and its exhibitions excite great interest among the good people of this and the surrounding counties, who, from far and near, attend, as lookers on or as competitors for the prizes offered. Among them, the most distinguished is Mr. Clay, who never fails to be present. The last exhibition was very largely attended. Many thousands were present, nearly half of whom, on the first day which was devoted to the exhibition of domestic manufactures, were ladies. The competition among them was exceedingly animated. The quantity and quality, of the fabrics of their fair hands, would astonish those who are in the habit of believing that the women of the slave States never work any. I am a poor judge in such matters, but I have the authority of others more competent, for saying, that many of the articles exhibited far exceed in beauty and texture, the best imported articles of the same kind. There was everything exhibited that a woman can make, from bed-quilts and blankets, down to butter and cheese. The second and third days were devoted to stock and implements of husbandry. Nothing excited more interest than some machines for breaking hemp, one of which was brought from Tennessee, the two others being *natives* of Kentucky. They were tested in the presence of competent judges and all most signally failed. It is said that something like forty different machines have been invented for breaking hemp, and strange as it may seem, not one of them has been found, after fair trials, to be worth a cent. I have no doubt a hemp-breaker can be and will be invented, but it has not yet been done. It will be a fortune to the man who does it. You, of the free States, are more interested in an invention of such a machine than we are, for, if you could save the labor of cleaning it, you would beat us raising hemp, and Ohio, Indiana, Illinois and Iowa, would almost monopolize the growth of that important staple.

Of the stock shown, it is only necessary to say, that they are the very best specimens to be found in this country—the very Paradise of fine stock. There were some fat bullocks, monsters rather, that would weigh near two thousand pounds *neat*. There were a large number of mules and asses as big nearly as horses. These long-eared gentry have attained a respectability and standing among the "beasts of the field" in this country, such as they have never reached before, perhaps, in any other portion of the world, and it was to speak of them, chiefly, that I commenced this letter. Why are not the farmers of Indiana turning their attention to the raising of mules! They are a source of immense wealth to Kentucky, and there is no reason in the world why they should not be so to Indiana. They are, perhaps, the most profitable species of stock a farmer can raise. They are always in demand, and are less subject to variations in price than either cattle or hogs. A mule, when taken from the dam, is worth here from twenty to thirty five dollars according to quality, and, they not unfrequently, when very fine, at that age, sell for fifty or sixty dollars. At two, or two and a half years of age, and fat, ready for market, they are worth from sixty to ninety dollars per head. A gentleman in this place sold, last summer, a lot of near a hundred two-year-old mules, at ninety dollars per head. Another gentleman of my acquaintance, sold a large lot of small mules, at sixty dollars per head. There are two classes of them—the large and small, and a market for each. The large ones go to New Orleans and the Southern States; the small ones bought up by traders from Connecticut, driven to New Orleans, and then shipped to the French islands in the West Indies. They can be raised in Indiana cheaper than in Kentucky. You have very little grass, but they require

less grass than almost any other animal. They are fed with corn and oats from the time they are taken from the dam. Your lands, worth one-half less per acre than ours, produce both of these quite as abundantly, if not more so. The labor of feeding them, except when large numbers are kept, is comparatively trifling. Indiana lacks nothing, but the inclination, to become one of the most extensive mule-raising states in the west. But little enterprise and capital are required. Size being the first quality of a mule, you have to obtain jacks of the large breeds; those little blue donkeys, scattered about through Indiana, are worse than worthless. But you need not go to Spain or Malta for them — they can be had here, at moderate prices, of the very first quality. It is strange that farmers will continue, year after year, to raise hogs and nothing but hogs, when so many other sources of wealth are at their command. The secret of the great wealth of this part of Kentucky is not so much in the great fertility of the soil, as in the variety of its productions. Here the farmers do not direct all their labor to a single object — they do not risk all upon the chances of the market for any *one* species of produce, but they produce everything they can produce, so that if one fails another may hit. So that hemp, hogs, horses, mules, cattle and sheep, are, in nearly an equal degree, the staples of the country. This is a matter worth the consideration of your farmers. Yours, &c. A. M. B.

For the Indiana Farmer and Gardener.

More about the "Yellows."

Mr. Editor — I herewith furnish you another extract from my Virginia correspondent in relation to the new disease in apple-trees mentioned in No. 18 of the Farmer and Gardener, p. 280. The leaves enclosed I showed to Mr. Alldredge and to Mr. Martin Williams, neither of whom have ever seen or heard of leaves similarly affected.

If the editor wishes, I will furnish him a leaf to forward to Dr. Harris of Massachusetts, who can, perhaps, afford some useful information on the subject. D.

"The editor of the Farmer and Gardener has, I perceive, noticed my account of the strange disease in the Big Hill apple-tree, and requests some further information respecting it. I enclose two leaves taken from one of the trees, which will show you in what way they are affected. Only the leaves appear to be affected. They put out in the spring and look thriving until towards midsummer, and then the spots appear. After a tree has been affected several years, the leaves are much smaller than those on a healthy tree. There is nothing peculiar in the appearance of the stock or body of the tree — the bark appears sound and healthy. I am inclined to the opinion that the disease, whatever it may be, originates with the leaves. That it cannot be caused by insects is obvious, I think, from this circumstance, — that the leaves on no part of the tree are affected except those on the graft of the Big Hill. Neither can it be a worm at the root, because that would affect the whole tree.

"The most of my trees are grafts set in a common apple stock, some four or five feet from the ground. Some of the stocks have several varieties of fruit grafted on them, yet none are affected but the Big Hill.

"I have not been able to ascertain whether the seven old trees on the "*Big Hill*" in Bartholomew county, (from which the fruit takes its name,) are affected. All the trees in the State, so far as I am informed, were produced from grafts taken from those trees, either directly or indirectly.

"Prof. Armstrong, of Washington College, has commenced a course of lectures on agricultural chemistry, to a class of about sixty of the substantial and practical farmers of Rockbridge county. After the lecture, some interesting subject, proposed at a previous meeting, is to be discussed by the members of the class; and I intend to propose this disease of the Big Hill apple as a subject for discussion, in order to elicit all the light which can be thrown on the subject.

"I have not thought proper to address these remarks to the editor of the Farmer and Gardener, but if you think fit you can put him in possession of them."

Preserving Cabbage in Winter.

Logansport, Sept. 25, 1845.

Mr. Editor: I have had much difficulty in keeping cabbages through the winter. I have buried them tops upward, and tops down; I have put them in the cellar; and kept them out of the cellar; and in all ways, and many of them would rot. In the fall of 1842 I cut my cabbages and brought, as I thought, all of them into the root-house. In the spring of 1843, (our winter broke up some time in April,) I found, in passing over my cabbage ground, about a dozen heads, lying on the ground top downward, as sound and green, expect a few outside leaves, as when put there. I concluded that if laid on their tops and kept in a frozen state, they would keep through the winter. Last fall, 1844, I placed my cabbages, about three in depth on the north side of a large log, which was lying by the patch, and they kept well till quite warm weather in spring.

Would it not be fair to conclude that if

cabbages will keep well, during a very cold winter, and a very mild one, thus exposed to the open air, that they would also in a medium one? I intend to try it until I am convinced; and if this accidental discovery will be of any use to others, I have no objections. I have gained by what others have said in your paper.

Your friend,

DANIEL EMBREE.

Early Farming in Indiana.

We take pleasure in publishing a portion of a speech delivered before the Vigo county Agricultural Society. No where but at the *West*, could such a speech be made; and its historical reminiscences are not the least valuable features:

Remarks of Geo. Hussey, Esq., before the Vigo county Agricultural Society.

GENTLEMEN:—It is many years since I first settled on the Wabash river. I have grown old among you. Common farmers are not much used to writing even upon agricultural matters; it is long since I have attempted it upon any subject, but as old men are allowed to be garrulous, just imagine you are listening to a talkative old farmer.

I believe I am not yet that ambiguous and celebrated character the oldest inhabitant; but if I live long enough there is no doubt I shall be. I do not know who drew the first furrow on Fort Harrison Prairie, but I know that there was a very little of it under cultivation when I first visited it. Your beautiful city was but a cluster of log cabins in a dense wood, the site of your town being heavily timbered. No prairie that I had ever seen appeared to compete with Fort Harrison Prairie; the eye of the traveller or visiter dwelt upon it with delight. I cannot well describe my feelings at the first sight of it; they were that of pleasure mixed with a degree of astonishment at so beautiful a landscape, covered with grass, interspersed with flowers peculiar to our prairies when in a state of nature;—it was a perfect paradise. To the practical farmer its capabilities were easily appreciated, rich beyond his hopes and so easily put in cultivation, it was then considered the garden of the world; from all parts was the eye of the emigrant fixed upon it, and under the easy manner in which land was then obtained it was quickly appropriated. It was then the far West; that was in 1818, 27 years ago. Where is the far West now?

I had dreamed of the Wabash river; when a schoolboy I had read about it; the Indians had a tradition among them that a large herd of Mammoth inhabited this region; that they interferred with the hunting grounds of the Red-men; that the Great Spirit became angry and sent his lightnings among them; that he destroyed them all but the big bull, who shook the lightning from his head, sprang over the Ouabash, and was still wandering in the interminable prairies beyond.

The cultivation of corn appears to have been the first thing attended to on this prairie, and for the best of reasons, it was the easiest raised, the surest crop and most wanted. It was frequently put in at the time of breaking up and yielded a good crop withot any farther cultivation at all; but afterwards with very imperfect cultivation it was said to afford from sixty to seventy bushels to the acre; and when sown with wheat, it produced abundantly, generally estimated to be from thirty to forty bushels to the acre. I remember one year there was so large a crop, that it could not be all harvested on account of the scarcity of hands, and not considered any great loss either, as labour was very high, and the nominal price of wheat after harvest was 25 cents per bushel, and no sale at that, so that much of it was fed to hogs and horses. I think Capt. Hamilton got his wheat all cut; it was thought he had forty bushels to the acre. The next year he cut a second crop off the same land without any cultivation or seeding of from 15 to 20 bushels to the acre, of sound merchantable wheat. But corn on this prairie has been the main crop, and some land has had corn raised upon it year after year without cessation for 20 years without manuring, and the stocks burnt off at that. Now every farmer ought to be aware that no land can remain productive when cultivated in that manner, and such lands show it now in their crops; they do not produce now more than thirty bushels of corn to the acre. As for wheat and oats they will scarcely pay the rent.

Wheat I believe is now conceded to be a rather uncertain crop; and I am afraid my prairie friends at the best do not expect more than twelve or fifteen bushels to the acre; there is something to make such lands more productive. The land is not poor if left uncultivated—rest alone, even if suffered to produce such crops, would help to restore it.

I wish some of our prairie farmers would try the experiment in a small way of plowing in a thick coat of weeds in June, cross plow and harrow the last of August, sow and plow in at least one and a half bushels of wheat to the acre by the middle of September, and let us know the result. I feel confident, weather permitting, the crop would fully renumerate the cultivator for his extra labour.

The man who first settles in the beach woods, where there is not a stick of timber

amiss, and looks around upon the thick forest, the beech roots that almost cover the surface of the ground, and which in wet weather is altogether inundated, one would think would be disheartened and despair of ever being able to make a farm; yet that was the situation of many of our cultivated fields in Lost Creek Township. How to make such land available with the least expense and in the most expeditious manner was my first study. To grub up the undergrowth would of course be first attended to, then to cut down and burn the small timber was considered as necessary, then the large timber was girdled, the land as well harrowed as the nature of the case would admit, sown with timothy seed and well harrowed in; thus with the aid of the scythe we had in two years an excellent meadow. My friend and neighbor, 'Squire Dickson, had the first timothy meadow in our township, or perhaps in the county, and I believe mine was the second. Experience, however, soon tuught us that dead trees in a meadow were very inconvenient, as the limbs were continually falling and were much in the way of the scythe. In five years the beach roots were rotten, and then, with the plow, we were able to do good execution, and could raise excellent crops of wheat and oats.

Corn was an uncertain crop; our land was not blessed with a very thick soil, and the subsoil was hard and compact, and held water like a basin. I knew but little about the cultivation of corn; my neighbors, however, thought *they* did, some of them being old corn-raisers; still they did not succeed well. Our plows were of the long-nosed species, and we always acclimated them, so that the wood-work was generally half rotten; our horses, too, were but little better than skin and bone; one of my neighbors used to say they ought to be in bed rather than at work, consequently we were not able to do much more than skin the ground, even where there were no roots; (when we encountered a root of course he backed out) and to go down to the yellow was out of the question, for it was the firm belief of us all that yellow clay, (our subsoil) was perfect poison to plants.

I had occasion to drain my well at that early time, as in wet weather it would be always full of water, and running over, and I liked good water, although I was not then a cold-water man; the ditch was deep and covered, it extended through a small field which was afterwards set in grass, and it was observed that the plants grew heavier and better on the top of the bank of yellow clay than any where in the field; after that we were not afraid to plow deeper, our ground became dryer and our corn crops something better.

Every farmer knows, or ought to know, that some plants will not suit certain kinds of land unless the land can be altered by manures or by draining. Now planting corn on one piece of land year after year for four or five years without gathering a nubbin, is the height of folly, yet I have seen it done. Corn they were determined it should fetch, but the green squirrel always ate up the crop; yet this land would have produced good grass, rye, wheat or oats if properly put in—yet a good husbandman ought to do his best to raise everything he wants, and in this country corn in particular; but in our clay lands they plowed too shallow, they planted their corn frequently on the flattest and wettest land, they planted late, they waited for the corn to be of a certain size before they began its cultivation, so that after wet weather sat in when they could not plow, the weeds grew and the corn did not; the poor farmer became discouraged, forsook his field—and I believe the nearest grocery to us then was at Terre-Haute.

To raise a good crop of corn in our woodlands we ought to plow deep—the subsoil plow would aid us much; corn should also be planted on lands that are not so flat, or at least on land that can be drained tolerably well by the plow. I think we ought to plant early; I am sure we ought to plow as soon as possible. The land ought to be kept clean while the corn is young; while it is dry, keep the plow agoing whether the field is weedy or not the greater the drought; the more the ground should be kept stirred. Chimists tell us that earth reduced to powder, or rather minutely divided, is not as good a conducter of heat of solid earth, consequently, the looser your ground, the less effect the heat of the sun will have upon it.

Wheat, rye, and oats always succeed well with us; they seldom fail altogether, but if better put in would produce larger crops.—Wheat and rye are mostly sown on oat stuble, or among the corn, or after corn is cut up; often sown on oat stubble before it is broken up and then plowed in—can we expect a good crop in the last instance? Sowing among corn I think a bad practice; when put in after corn is cut up is generally too late; wheat does best with us when put in by the middle of September. If put in after oats, the stubble should be well turned under immediately after the oats can be removed, cross plowed and well harrowed. Before sowing time, sow 1½ bushels of seed to the acre and plow it in, and if you wish to follow with grass, which is my plan, it should be harrowed as level as possible. I never found it any inconvenience to sow either timothy or clover immediately after putting in wheat, and then if the land was rolled in the Spring it would be the better for it.

Extra crops of wheat have been raised, with us by breaking up an old meadow in the Spring, keeping it well plowed during the summer and sowing early in September; 40 bushels to the acre has been obtained and can generally be secured should the weather be favorable.

I hope in the course of the great improvements that are now making in the science of agriculture, they will not discard the plow; my heart-warms to that implement; it is the symbol of our process. I feared for it when the discovery was made that grain would grow on the bare ground covered only by straw. When our grounds are planted with posts and our fields hung with wires, the soil must be still broken up and prepared to receive the seed. Gentlemen, the time seems to be fast approaching when an agriculturist must be a scientific man; he ought now to be well acquainted with chimistry. It would be a source of great pleasure to him to be somewhat versed in Botany: it is much to be regretted that there are so few of us who know any thing at all of Geology; but no farmer can if he makes good use of his eyes be altogether ignorant of Natural History.

It is obviovs to you all, gentlemen, that we are subject to many inconveniences; and frequently to considerable losses by the state of the weather; it is not always propitious: sometimes we suffer from drought, and frequently have much difficulty in saving our crops from incessant rains; sometimes our fields are withered by the heat of the sun, at other times we are inundated. Now those are things we cannot help, yet were we better acquainted with atmospheric phenomena we might be able to avoid some losses and much anxiety; yet it is very certain that we should be in a worse condition were we able to regulate the weather ourselves. Some of us judge of the weather by spider's webs or by the action of the spider itself, some by the motion and conduct of other insects—but we all seem to place some reliance on the moon; we have been taught from our youth up to expect a change of weather at the full and different quarters of that satelite; we were also taught that there are wet and dry moons, judging from the position of her horns when new. Can this be all false! Says Dr. Lardner, the celebrated lecturer on Astronomy, "on a former occasion I examined the question respecting the supposed influence of the moon upon the weather, and demonstrated that so far as actual observation has heretofore afforded grounds for reasoning, there is no discoverable correspondence between the lunar changes and the vicissitudes of rain and drought which can justify or in any degree countenance the popular belief so generally entertained as to dependence of change of weather upon the changes of the moon." He goes on to knock all our predisposed opinions with respect to the influence of that Luminary into a cock'd hat.

We are also continually injured by insects, birds and small animals; a knowledge of Natural History would be of importance to us in this case. Now I contend that God never created any living being in vain, if it was but to increase our vigilance; see how beautifully balanced is all creation, one order of beings cannot multiply without adding to the number of its enemies by affording it food and adding thus to its ability to increase. "We find things so connected together that they are subservient to the same end; the death and destruction therefore of one thing, is made useful in the relation of another, and this is one of the most interesting facts in the economy of nature," so that if it was in our power at once to destroy the enemies of any particular insect and we were to do so, the consequences would be dreadful. That little insignificant insect, the army worm, itself would depopulate the world were it not for its numerous enemies—it is generally supposed they die by the heat of the sun, it is not so; there is a small insect that pierces their body when very young and lays its eggs within them, the worm soon hatches those eggs and the worm is destroyed by the young brood: not one to a thousand come to perfection, birds and small snakes are continually devouring them.

Then how cautious we should be in destroying any thing with whose nature and habits we are unacquainted. Most of the feathered tribe befriend us by destroying worms and insects. We have learned to be merciful to the crow, yet I remember when a price was set upon his head. The blackbird does us some injury, but a great deal of good. See how closely in the furrow he follows the plowman, busily engaged picking up the worms he uncovers. There is the martin and swallow, which in breeding time, consume millions of worms and other insects. "Sparrows," says an English writer, "feed their young 36 times an hour; which calculating at the rate of 14 hours a day, gives 3,500 times a week." There are the innumerable tribe of woodpeckers and many other birds that live entirely on worms, and are continually at work clearing our fields and our trees. We should not kill even the owl and the hawk, if they keep their distance from the barn-yard. Allow me to quote from an essay on the economy and harmony of nature. It is to the purpose.—Speaking of birds, "some are under the

shrubbery, capturing the shafts, which would become the despoilers of the garden, while other birds are inspecting the buds in the orchard and picking off every one that contains a caterpillar or a nest of eggs. The rooks are clearing the meadows of the young cock chafers which the heat has brought near the surface, and which would destroy the grass, and the Sea Gull comes from a distance to clear the fields of "animal weeds," while the vegetable ones are being turned down by the plow."

The whole of the reptile tribe are carniverous, they are the friends of the farmer, they, like the dog in the manger will neither eat vegetable matter themselves, but are always on the watch and will not if they can prevent it suffer it to be eaten by others.—The rattle snake should be excluded from our fields on account of his poisonous and dangerous character, but all others should be cherished and protected. I have devoted much time in observing their nature and habits. I have also examined a great many different species and find none that has come under my notice but rattle snakes that are poisonous. Frogs, lizzards and the tortoise, should be allowed to wander through our fields, our gardens and orchards; we do not know the amount of good they do, but we know they feed on worms and insects, and we know they do no injury to trees, fruit or vegetables. Small snakes live also on worms and insects, and destroy a great many: the larger, particularly black snakes; devour small animals that are very destructive to the grain in our fields, our stacks and our barns. They prey upon the ground squirrel, field mice, moles, young rabbits, rats and mice; they glide through our standing grain without displacing a straw, and if permitted would use about our stacks and barns, and if in sufficient numbers, they would not leave a rat or mouse to be seen They can penetrate a rat's hole, seize the animal, bring him out and devour him at their pleasure, as I have seen them do frequently.

I know I am contending against popular prejudices, but how many false and foolish notions do people imbibe when young (to say nothing of ghosts and witches) that we ought to get rid of; I know most men have been taught that it is their special duty to kill snakes; would it not be as well to enquire is there any harm in letting it alone? Let us reason about it thus—there is one of God's creatures, a large black snake lying in the road, if I kill it I can make no use of it, its skin is good for nothing, it is not fit to eat, I am sure it cannot injure me, I can avoid it, there are 1000 chances to one that it never bites any body, there are as many chances that no person will be scared to death at the sight of it, and an equal number of chances that if it does bite any person, little injury will result from it. I have seen men turn pale at the sight of a serpent not larger than my finger.

I was dressing out corn this summer in the prairie, and being near the road I heard a person called out Mister, there's a snake! why don't you kill it? Well, now stranger said I, I 'll tell you, this land does not belong to me, and if the owner wants his snakes killed let him come and do it himself.

I saw a stout able bodied man stop suddenly in the road,

> "As one that spies a serpent in his way,
> Glistening and basking in the sunny ray,
> Discordant stops to shun the danger near,
> Then walks with faintness on and looks of fear."

I saw him cautiously approach a fence, and somewhat to the detriment of one of my agricultural friends, tear up a stake, and when I came up, I found he had dreadfully mangled the body of one of those unfortunate reptiles, something over twelve inches long. We seem to have reversed and improved upon the doctrine taught us by the great head of the Christian Church, "to love our enemies." We not only hate, but destroy our friends. But I feel I am growing tedious and leave the subject to your consideration, eschewing all prejudices.

I admire the French gentleman, that in determining to enlarge the circle of edibles, discarding all former opinions and judging for himself, tried almost all kinds of animals, probably snakes included, who had a Turkey Buzzard roasted, and in writing to a friend said, "I have no prejudices, but Turkey Buzzard is not good."

Manures.

1. *Of Animal and Vegetable Manures.*—Decaying animal and vegetable substances are by far the most useful class of manures. We shall consider the theory of their operation, their specific kinds, their preservation and application to the soil.

We have already stated as a general principle, that no solid substance can pass into the organs of plants in a solid state. And it is equally certain, that the proper food of plants is either such substances as are soluble, or such as are capable of being converted into æriform matter.

It has been found by universal experience, that animal and vegetable substances deposited in a soil, are comsumed during the process of vegetation, and they can only nourish the plant by affording substances capable of being dissolved by water, or gaseous substances pass into the atmosphere, and therefore must produce but a small effect, as they are soon mixed with the surrounding air. The great object then, in the application of manures, should be to make them af-

ford as much soluble matter as possible to the roots of vegetables, in a slow and gradual manner, so that it may be entirely consumed by the plant in forming its organizable parts.

There are but few vegetable substances which in their natural state are soluble; therefore, they must undergo some change to fit them for the food of plants.

If any fresh vegetable matter which contains sugar, mucilage, starch, or other vegetable compound, which is soluble in water, be moistened and exposed to a temperature of 55° to 80° in the air, oxygen gas will be absorbed, and carbonic acid gas (*fixed air*) will be given out; heat will be generated, and then several kinds of gases will be evolved, and a sour or bitter dark-colored liquid will be formed; and if the process continue sufficiently long, nothing solid will remain, except earthy and saline matter. In proportion as there is more matter soluble in water, other circumstances being equal, will the process be more rapid. It is in this manner that all vegetable substances are reduced to a fit state for becoming the food of plants—in other words, *rotted*. Pure woody fibre undergoes this change but slowly, unless mixed with some substances which are very liable to change and rot. Every known vegetable substance may thus be reduced to other substances which are soluble in water, and therefore may be used as manure. Animal matters are more liable to these changes than vegetable substances; oxygen is absorbed and fixed air ammonia (*hartshorn*) are given out during the process. The produce, as is well known, are various fetid gases, dark-colored acid and oily liquids.

From the above considerations, it is evident that whenever a manure consists already of matter soluble in water, it should not be permitted to ferment, or as farmers express it, it should not be allowed to *heat;* and the only cases in which these processes can be useful, are, when the matters consist principally of substances which are not soluble in water, such as wood. To prevent manures from decomposing or *heating*, they should be kept from water as much as possible; hence the utility of manure sheds, which are beginning to come into fashion; manures should also be kept as free as possible from the air, and cool. Common salt and spirits, it is well known, will preserve meat and vegetable substances, because they attract the moisture from them and prevent the decomposing effects of water.

Of the specific kinds of Animal and Vegetable Manures.— The difference between the various kinds of manure is of very great importance to the farmer, and should be clearly and distinctly known by every cultivator of the soil, because different manures contain different proportions of these elements which are necessary for the food of vegetables, and of course require a different treatment to enable them to produce their full effect when applied to a soil.

Green, juicy plants contain much sacharine (*sweet*) and mucilaginous (*gummy*) matter, and of course readily undergo fermentation, which will break down and render soluble the woody and hard parts of the plants. When intended, therefore, for manure, they cannot be used too green, in order that they may *heat* in the soil, and therefore prevent the escape and waste of their most useful parts.

Green plants contain the largest quantity of easily soluble matter when they are in flower, or just before. Green plants, pond woods, sods, &c., require no preparation to fit them for manure, and if buried in the soil, the soluble matters are slowly dissolved, and the slow manner in which they rot or decompose, prevents the loss of elastic matter, owing to the want of a free communication of air.

From a proper consideration of the above principles, we may see the utility of sowing seed, raising plants, and plowing them into the soil, to answer as manure for succeeding crops.

Sea-weeds, consisting of different kinds of sea-plants, are extensively used as a manure on our sea-coast. Those who have used this substance as a manure, know that it answers for but a single crop, which is easily accounted for from the large quantity of water which it contains. It is evident, then, that sea-weeds, as a manure, should be used as green as possible; fermentation destroys the greater part of their nutritive qualities for the food of plants.

Dry straw, spoiled hay, cornstalks, ect. in all cases are useful manures. It is customary with our farmers to rot these substances before using them, by which means the greater portion of their parts which are soluble, is destroyed and lost. Fermentation will render straw a more manageable manure, and when intended for a single crop, it is better; but the soil is less improved than it would be, if the whole of the vegetable matter were finely chopped and mixed with the soil dry. In this case it would rot in the soil without any loss.

Woody fibre, such as tanners' spent bark, chips, saw-dust, &c. seems to be the only vegetable matter which needs fermentation or rotting, to fit it to become vegetable food. These substances are very retentive of moisture, and therefore cannot be easily rotted without the assistance of some other substance which will ferment, such as dung.

Peaty matters, which contain roots and other vegetable substances, remain for years exposed to air and water, and yet will not heat and rot; therefore, such substances, in their natural state, cannot afford plants much nourishment. The best mode of bringing such substances into matter fit for the nourishment of plants, is to mix them thoroughly with common barn-yard dung. One part of dung is considered sufficient to bring four parts of peaty matter into a state fit to be applied to land. The more such mixtures heat, and the more readily it ferments, the better will it be fitted for the purpose. If a quantity of living vegetable substances be mixed with the peat, the more rapid will be the fermentation; because these have a great tendency to undergo this change.

Manures from animal Substances generally require no chemical preparation to fit them for the soil. The great object of the judicious farmer will be to blend them with the soil as intimately as possible, to prevent their too rapid decomposition.

Fish forms a very powerful manure in whatever state it is used. Fish contain all the properties necessary for the food of plants, in a very soluble state, which accounts for their powerful effects. The writer has seen a most luxuriant crop of corn, growing on a poor, hungry soil; manured with one small alewive to a hill.

Bones, of late years, have become a favorite manure, particularly in England. The ground on which many bloody battles were fought during the wars in Europe, have been examined, and the bones of the slain, horses and men, carefully collected and exported by ship-loads to Great Britain, where they are ground up and applied as manure; a melancholy and degrading illustration of the passion for war. Bone is formed of earthy salts, the principal of which are found in plants, together with fat jelly, &c., which accounts for its powerful effects.

Urine has been long known as an excellent manure. All kinds of urine contain a large quantity of the elements of vegetables in a state of solution; but during the putrefaction of urine, the greater part of soluble matter is destroyed; therefore, it should be used as fresh as possible, and mixed with earth or water, as it is too strong to form a proper fluid nourishment for plants.

The dung of birds is among the most powerful manures, particularly such birds as feed on animal food, as sea-fowl. The *guano*, which is used extensively in South America, is a substance of this kind: it is used particularly for Indian corn. The dung of birds has been but seldom used in this country, on account of its scarcity: no doubt it might be found on many of the small islands on our eastern coast, and from thence might be transported to the main land with profit.

Night soil, it is well known, is a powerful manure, and always contains abundance of those principles which constitute vegetable food. The disagreeable smell of night, soil may be easily destroyed by quick lime, and if exposed to the air in thin layers, it soon drys, forming a mass easily pulverized and without smell. In this state, it is an article of commerce in France, under the name of *poudrette*.

[*Note.*—Gypsum is a better disinfecting agent than lime to use in case of night-soil intended for manure—as it *absorbs* the ammonia, while the effect of lime is to *set it free.*—*N. E. Far.*]

The dung of cattle, horses, and sheep, contains a large quantity of matter soluble in water, which substances are exactly similar to the soluble parts of the vegetables on which they feed and are nourished. The part of dung which is not soluble, appears to be woody fibre. In the treatment of the pure dung of cattle, horses and sheep, there is no reason why it should be made to ferment, except in the soil—or if suffered to ferment, it should only be in a slight degree, merely to bring on a disposition in the woody fibre to change. [Bousingault, in his recent work, also supports that opinion.] The grass in the neighborhood of recently voided dung, is always coarse and dark green: many persons suppose this to be owing to some noxious quality in green manure, but it is rather the result of an excess of food furnished the grass.—*Scientific Tracts.*

General Observations on the Cerealia.

In our general observations on food, we explained at some length the chemical principles in the various products of the vegetable kingdom, and pointed out that they were distinguished from each other, as to their nutritive properties, by their abounding more or less in their proportions of starch, glutin, mucilage, sugar, jelly, fixed oils, and acids. The first three constituents are the most valuable, and plants which contain a large proportion of them are termed *farinaceous*, because they yield, on being dried and pounded, or ground, a farina, or meal, which, when boiled in water, forms a pulpy substance, sometimes used as food, and which, by proper management, can likewise be converted into bread.

Among the farinaceous vegetables, by far the most important are the seeds of the Cerealia, or corn plants, which belong to the natural order of Gramina, or grasses, in botanical systems. Next to the Cerealia are the Leguminosæ, or leguminous plants, whose seeds are found in a pod botan-

ically called a legumen, such as peas and beans. Many roots, fruits, and even the stems of foreign trees, yield a large proportion of farina, of which the most valuable that we possess is the potato. Almonds, walnuts, and filberts contain farina mixed with oil and mucilage, but they are not, with us, employed for the purpose of making bread. Other substances will be mentioned at the end of this article; but at present our object is to confine ourselves to such farinaceous materials as are in common use in this country for the manufacture of bread.

It appears to be one of the wise dispensations of Providence, of which the study of nature furnishes so many and such striking examples, that the Cerealia, or corn plants, are distributed all over the face of the earth, or, at least, in all those parts where it is most desirable that man should fix his abode; and they are likewise now become to such a degree the object of culture, that no civilized country is destitute of this valuable addition to its means of sustenance.

The principal corn plants are wheat, rye, oats, rice, maize, and millet; there are many others belonging to the same tribe, but they are little in request, on account of the smallness of their seeds. The term *corn* is generally applied, in every county, to that species particularly which is raised in the greatest quantity, and which is most generally employed; thus, in America, maize, almost solely, is called corn. Wheat is the most valuable of the grains used in the fabrication of bread; it is, in fact, the only one of which light, porous bread can be made; the others are only used in climates not suitable to the cultivation of wheat, or for malt, or for the food of cattle.

All the corn plants are annuals, the head or ear, containing the seed being supported upon a straw, or culm, which is hollow, and divided by joints (hence they are called culmiferous plants,) a single leaf proceeding from each joint. It is worthy of remark that the stems are coated with a glossy varnish, consisting of actual silex, or flint, which the vegetable has the power of extracting from the soil and dissolving, although the particular means by which this is effected are unknown to us. This is well seen in the bamboo and canes, which, though not Cerealia, belong to the Gramina. Masses of spongy glass derived from this source have been found where stacks of corn have been burned down, and this is the reason why the ashes of straw form an excellent polishing material, the siliceous part not being destroyed by the combustion.

The Cerealia are all remarkable for their extraordinary power of multiplication, each grain or seed throwing out several stalks, all of which bear ears; and the number of these is not limited, but depends upon the more or less favorable circumstances. This increase in the stalks is called *tillering*, and is performed by a second set of roots, called coronal roots, shooting out at the surface of the ground subsequently to the first or seminal roots. Some extraordinary instances are related of this kind of multiplication. In 1660, a plant of barley was preserved in Paris, as we are told, by Kenelm Digby, that had 249 stalks springing from one grain, and in the ears were counted 18,000 seeds. A still more extraordinary fact is related in the Philos. Trans., vol. ixviii.: Mr. Miller, of Cambrige, found that a single grain of wheat, sowed on the second of June, had produced eighteen stalks; on the eighth of August he took up the plant, and divided the stalks from each other, each having its root, and planted them again separately. Every separate plant now again tellered, throwing out fresh roots and stalks. These he again took up, divided, and planted as before, and so on several times, till by the next April they had multiplied to 500 plants, all extremely vigorous; the number of ears from these amounted to 21,109, and the number of grains to 576,840. But such instances are uncommon. The straw of the Cerealia is useful as fodder for cattle, for thatching, and various other purposes.

The corn plants have been so long the produce of cultivation, that all knowledge of their native countries is lost; and, indeed, they have undergone so much change from the progress of agriculture, and so different are they at present from what they were in their wild state, that the originals cannot be recognized with certainty; nor is it clear, when these plants are discovered in unfrequented regions, whether they have not been brought there at some distant time, and have remained as a trace of ancient civilization. It is most probable, however, that it was from the central parts of India the rest of the world has derived this important gift of Providence, as well as most of the other useful vegetables and fruits cultivated in Europe. They were all, except maize, unknown in America on its discovery.

The corn plants do not grow equally in all climates; and the globe may be divided into several zones, according to the prevalence of some particular grain. Rice requires the warmest climate; next maize; then wheat, rye, barley, and oats. The first three are the most extensively distributed; maize has the greatest range of temperature; but rice may be considered as supporting the largest number of the human race. The natural distribution of these grains over the globe depends not only upon climate, but likewise

upon the industry of man, the state of commerce, and other causes by which the limits of their cultivation are extended.

The following view of the distribution of the Cerealia is abridged from a German work quoted in "Jameson's Journal" for 1835:

"Within the polar circle agriculture is found only in a few places. In Siberia, grain reaches to the utmost only to 60°; in the eastern parts scarcely above 55°; and in Kamtscatka there is no agriculture. On the northwest coast of America the polar limit of agriculture appears to be somewhat higher; for in the more southern Russian possessions barley and rye come to maturity. On the eastern coast of America it is scarcely above 52°. It is only in Europe, in Lapland, that grain is cultivated at so high a latitude as 70°; beyond this, the bark of the pine, dried fish, and here and there potatoes, supply the place of grain. The grains which extend farthest to the north in Europe are barley and oats; these, which in the milder climates are not used for bread, afford to the inhabitants of the northern parts of Norway and Sweden, and part of Siberia, their chief vegetable food. Rye is the next which becomes associated with these. This is the prevailing grain in a great part of the northern temperate zone, namely, in the south of Sweden and Norway, Denmark, and in all the lands bordering on the Baltic, the north of Germany, and part of Siberia. In the latter, another very nutritious grain, buckwheat, is very frequently cultivated. In the zone where rye prevails, wheat is also generally to be found, barley being here chiefly cultivated for the manufacture of beer, and oats supplying food for horses.

To these there follows a zone in Europe and Western Asia, where rye lessens or disappears, and wheat almost exclusively furnishes bread. The middle or south of France, England, part of Scotland, a part of Germany, Hungary, the Crimea and Caucasus, as also the lands of Middle Asia, where agriculture is followed, belong to this zone. — Here, also, the vine is found; wine supplants the use of beer, and barley is, consequently, less raised. Next comes a district where wheat still abounds, but no longer exclusively furnishes bread, rice and maize becoming frequent. To this zone belongs Portugal, Spain, part of France on the Mediterranean, Italy, and Greece; farther, the countries of the East, Persia, northern India, Arabia, Egypt, Nubia, Barbary, and the Canary Islands; in these latter countries, however, the culture of maize or rice towards the south is always more considerable; and in some of them several kinds of Lorghum (Doura) and Poa Abyssinica come to be added. In both these regions of wheat, rye only occurs at considerable elevations; oats, however, more seldom, and at last entirely disappear, barley affording food for horses and mules.

"In the eastern part of the temperate zone of the old continent, in China and Japan, our northern kinds of grain are very unfrequent, and rice is found to predominate. The cause of this difference between the east and the west of the Old Continent seems to be in the manners and peculiarities of the people. In North America, wheat and rye grow as in Europe, but more sparingly. Maize is more raised in the western than in the old world, and rice most cultivated in the southern provinces of the United States.

"In the torid zone, maize predominates in America, rice in Asia, and both these grains are in nearly equal quantity in Africa. The cause of this distribution is, without doubt, historical; for Asia is the native country of rice, and America of maize. In some instances, especially in the neighborhood of the tropics, wheat is also met with, but always subordinate to the other kinds of grain. Besides rice and maize, there are in the torrid zone several kinds of grain, as well as other plants, which supply the inhabitants with food, either used along with them, or entirely occupying their place. Such are in the new continent, yams, the manihot, and the batatus, the root of which and the pasong furnish universal articles of food. In the same zone in Africa, doura, pisang, manihot, and yams. In the East Indies and on the Indian islands, Panicum frumentaceum, several palms, and cycadeæ, which produce the sago, pisang, yams, batatas, and the bread fruit. In the South Sea islands grain of every kind disappears, its place being supplied by the bread-fruit tree, the pisang, and Tacca pinnatifida. In the tropical parts of New Holland there is no agriculture, the inhabitants living upon the sago of various palms, and some species of arum.

"In the high lands of South America there is a distribution similar to that of the degrees of latitude. Maize, indeed, grows at the height of 7200 feet above the level of the sea, but only predominates between 3000 and 6000 feet of elevation. Below 3000 feet it is associated with the pisang and the above mentioned vegetables, while from 6000 to 9260 feet the European grains abound, wheat in the lower regions, and rye and barley in the higher. Potatoes alone are cultivated from 9260 to 12,300 feet.

"To the south of the tropic of Capricorn, wherever agriculture is practiced, considerable resemblance with the northern temperate zone may be observed. In the southern parts of Brazil, in Buenos Ayres, Chili,

at the Cape of Good Hope, and in the temperate zone of New Holland, wheat predominates; barley, however, and rye, make their apperance in the southern parts of these countries and in Van Diemen's land. In New Zealand the culture of wheat is said to have been tried with success, but the inhabitants avail themselves of the Acrostichum furcatum as the main article of sustenance."

Ency. Domes. Econ.

Precautions to be used in keeping Animal Food for a short time previously to its being Cooked.

The fleshy fibre, or muscular part of living animals, is endued with a property called *irritability*, and this does not cease the instant that life becomes extinct, but continues for a short time after death. The hearts of many animals continue to beat after being separated from the body, and a muscle cut from a living creature trembles and palpitates for some short time afterward. The bodies of animals that are slaughtered, cool gradually, and when they are quite cold, and irritability has ceased, the muscles begin to contract and grow rigid; first those of the trunk, and then of the limbs. In whatever attitude the limbs are placed at the commencement of rigidity, they continue, and hence butchers take care to dress the carcasses of animals properly while they are in a supple state.

While this rigidity continues, meat is tough, and can scarcely be made tender by any process of cookery, except by being long stewed, or being made into soup, for which it is quite proper; but if boiled or roasted in this tough state, it resists in a considerable degree the action of the gastric juice, or, in other words, it is hard to digest. If meat be kept for a few days or less, according to the weather and climate, this rigidity ceases, the flesh becomes softer, and, before long, those changes commence, which, if suffered to go on, would terminate in prutrifaction. Now the moment when the meat is in the fittest state to be dressed, as being the most tender, is just *before* the last change commences; for it is the nature of the decomposing or putrefactive process to loosen the fibres, and dispose the muscular part to be easily acted upon by the digestive organs. It is upon this principle that animals killed by electricity and cooked immediately are found to be tender, because the electric fluid has destroyed entirely the irritability of the nervous system.

But the length of time that meat ought to be kept after it is killed depends upon the climate, the season of the year, the weather, and the temperature, moisture, and ventilation of the place where it is kept, as likewise the particular kind of animal. In very warm climates, meat will not keep above four or five hours, and is therefore used in a more recent state than in cold countries. With us it is sooner ready in summer than in winter; and in some animals, as in venison and game, this change is permitted to show stronger symptoms than in other kinds of meat before it is considered as fit for the spit. But although it is proper to hang up meat for some time in the air till its fibres have lost some degree of their rigidity, yet it must be clearly understood that if it be kept so long as to lose its natural sweetness and to exhibit symptoms of putrescence, it becomes as detrimental to health as it is disagreeable to the smell and taste. Much experience and attention to various circumstances are necessary to determine exactly how long any particular joints ought to hang up in order that they may be ready against a certain day; and much of the success of the cook will depend upon hitting this point with precision, by using the necessary precautions. In warm weather, the change from the rigid state towards putrefaction proceeds often too rapidly, and then it requires to be checked. But a moderate reduction of temperature may be all that is required.

Meat should, accordingly, be always kept in the most cool and shaded places, as a degree of temperature very little below that of the atmosphere, even 10°, is of great use in warm weather.

In summer it is difficult to get meat that is not either tough or tainted, as the butcher runs great risk in keeping it sufficiently long, and is therefore glad to sell it as soon as he can. The best mode, therefore, is to buy joints as fresh as possible, and to hang them up in the larder, where the manner of proceeding must be founded upon the principles which have been alluded to.

The due degree of *itineration*, or tenderness of meat, may be partly ascertained by the way in which it yields to the pressure of the finger, and by its opposing little resistance in attempting to bend the joint; fortunately, the slightest degree of change beyond that can be detected by the odor.

Where a regular larder is desired, its construction should be carefully attended to. It should be cool and dry, should have good ventilation by windows on opposite sides, which ought to be covered with wire cloth to admit the air, but not the flies, which lay their eggs in the meat, and occasion it to be what the cooks call *fly-blown;* and from these eggs, if suffered to remain, maggots will be produced. Meat should be carefully examined every day in summer, wiped dry, and such bits as are beginning or seem liable to taint, particularly kernels, should be re-

the purpose of destroying worms, to a greater extent than Jacob Busk, Esq., of Ponsbourn park, in Hertfordshire. His valuable experiments extended over some hundreds of acres of wheat. To use his own words: "In every situation, and at every time, the effect appeared equally beneficial." The quantity per acre, "about four or five bushels sown out of a common seed shuttle." The period, "in the evening." The effect: "In the morning each throw may be distinguished by the quantity of slime and number of dead slugs lying on the ground. In some fields it has certainly been the means of preventing the destruction of the whole crop." Six bushels of salt per acre were applied by hand in April, 1828, to a field of oats attacked by the slugs and worms, on the farm of Mr. John Slater, of Draycote, near Oxford. The crop was completely saved by this application, although an adjoining field, not salted, was completely destroyed by this sort of vermin.

Salt, too, is a complete prevention of the ravages of the weevil in corn. It has been successfully employed in the proportion of a pint of salt to a barrel of wheat.

The black and green fly may be killed by dipping the point of the young shoots of plants infected with them into a thin cream composod of stiff yellow clay mixed with water; the clay will, it is true, look dirty upon the trees for a few days, but the first shower of rain washes it off, and the shoots will look more healthy than before the application. "There is no fear," says Mr. Loudon, "of the return of the insects that season." The scale in pines may be destroyed by the same mixture. The bug (*aphis lanigera*) upon fruit trees may be killed by the use of the same clay and water, made as thin as whitewash, and mixing with every six gallons of it two pounds of cream of tartar, one pound of soft soap, and half a peck of quick lime. "When you think," adds Mr. Loudon, "that the weather is likely to continue dry for some time, take a bucketful of this mixture, and with a large brush wash over the bark of the trees, wherever you think it has been infected with the bug. A man will dress a number of trees over in a few days with a whitewash brush and this liquid; it is only necessary to be careful to do it in dry weather so that the rain may not wash over the mixture for some time. Flies and wasps: a mixture of pepper, sugar, and water, will speedily attract and destroy them. (Gard. Mag. No. 37. Quart. Jour. Agr., vol. iii., p. 1,071.) Moss and insects: Mr. Thomas recommends that the trees infected should be sprinkled with a fine powder in March, and again in October, on a foggy day, when the trees are damp but not dripping, and I have no doubt of its efficacy. The powder may be composed as follows: slack five bushels of lime, hot from the kiln, with common salt and water, say one pound of salt to each gallon of water. When the lime has fallen to a fine powder, add, by small quantities at a time, a bushel of soot, stirring it until it is completely incorporated.—Mr. Thomas found that one man can dust over with the powder fifty trees in a day, and that the moss in the turf, under fruit trees thus treated, is also completely destroyed by the application.

Curing Beef.—This being the proper season for curing Beef, we furnish our readers with the following directions on the subject:

The best pieces for corning are the plates, ribs and briskets. Pack the pieces in casks, giving a very slight sprinkling of salt between each piece. Then cover the meat with a pickle made by boiling, in 4 gallons of water, 8 lbs salt, 3 lbs brown sugar, 3 oz salt petre, 1 oz pearlash, for 100 lbs of meat. Keep a heavy flat stone on the meat, that it may be well immersed in the pickle. Beef packed in this manner will keep a year, and will rather improve than grow worse.

Another mode recommended by a gentleman of long experience in the packing of beef and pork, is the following: For 100 lbs beef take 4 lbs brown sugar, 4 oz saltpetre, and 4 quarts of fine Liverpool salt—mix all intimately together, and in packing, sprinkle it evenly over the meat. Add no pickle, the disolving of the salt, &c. with the juices of the meat, will be sufficient. Keep the meat closely pressed together by a good weight. We are assured that this is the best mode of packing beef, and that the quality of the meat is unexceptionably fine.—*Alb. Cul.*

American Peaches.—Mr. Edward Wilmer, of the European Times, on leaving Boston, for England, in September, took a box of Peaches from that city, which, on his arrival at Liverpool, were found to be in excellent condition, and they were greatly admired by the friends to whom he presented them, as the product of the United States. The demand in England for American fruit is likely to become a matter of some importance. A large quantity of Apples were sent there last season and paid well. Many orchards of five, ten and twenty thousand trees have lately been planted in the Hudson river counties, with a view of growing Apples for export to foreign countries. We see no reason why Peaches from New Jersey and other Atlantic regions where they will grow, cannot be sent to England by steamers and arrive in good condition.—*N. J. Daily Advertiser.*